

PATENT**CLAIM AMENDMENTS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1- 25. (Canceled)

26. (New) A method comprising:

accessing a first index table comprising a plurality of entries, each entry comprising an identifier associated with a corresponding memory location storing corresponding macroblock information;

accessing a first plurality of macroblock information in a first order based on identifiers accessed from a first subset of the plurality of entries of the first index table, wherein the first plurality of macroblock information is associated with a first source macroblock and includes motion vector and quantization information; and generating a first estimated destination motion vector based on the first plurality of macroblock information.

27. (New) The method of claim 26, further comprising:

generating a decoded image based on the first plurality of macroblock information.

28. (New) The method of claim 27, further comprising:

generating an encoded image based on the decoded image and the first estimated destination motion vector.

29. (New) The method of claim 26, wherein each entry of the plurality of entries has a predetermined size.

30. (New) The method of claim 29, wherein the predetermined size of each entry is the same.

PATENT

31. (New) The method of claim 26, wherein each entry of the plurality of entries is arranged relative to the other entries of the plurality of entries to indicate the first order.

32. (New) The method of claim 26, further comprising:
generating estimated macroblock information for a destination macroblock, wherein the estimated macroblock information is based on the first plurality of macroblock information and the destination macroblock is downscaled relative to the first source macroblock.

33. (New) The method of claim 32, wherein each of the plurality of entries of the first index table comprises an indicator associated with a memory location storing corresponding source macroblock information and comprises an end of destination macroblock portion storing a value indicating whether an entry of the plurality of entries is the last entry associated with the estimated macroblock information.

34. (New) The method of claim 33, wherein each entry of the plurality of entries is arranged relative to the other entries of the plurality of entries to indicate the first order.

35. (New) The method of claim 26, further comprising:
accessing a second index table comprising a plurality of entries, each entry comprising an identifier associated with a corresponding memory location storing corresponding macroblock information;
accessing a second plurality of macroblock information in a second order based on identifiers accessed from a second subset of the plurality of entries of the second index table, wherein the second plurality of macroblock information is associated with a second source macroblock and includes motion vector and quantization information; and
generating a second estimated destination motion vector based on the second plurality of macroblock information.

36. (New) The method of claim 35, further comprising:
generating a first macroblock based on the first estimated destination motion vector;

PATENT

generating a second macroblock based on the second estimated destination motion vector; and

wherein the first and second macroblocks are to be displayed simultaneously.

37. (New) A method comprising:

storing source macroblock information for each source macroblock of a plurality of source macroblocks;

determining an index table based on a video source resolution and a video destination resolution, wherein the index table comprises a plurality of entries, each entry comprising an identifier associated with a memory location storing source macroblock information for a corresponding source macroblock; and

storing the index table.

38. (New) The method of claim 37, further comprising:

determining a data instruction packet to be processed by a video transcoder, wherein the data instruction packet comprises an identifier associated with a storage location of the index table.

39. (New) The method of claim 37, wherein the index table includes an end of macroblock indicator to indicate a portion of the index table associated with a destination macroblock.

40. (New) The method of claim 39, wherein the end of image indicator is stored as a value at a field of an index table entry.

41. (New) A system comprising:

a video input to receive source video data;

a video input controller coupled to the video input to determine macroblock information corresponding to the received source video data, wherein the macroblock information includes motion vector and quantization information;

PATENT

a first memory controller coupled to the video input controller to store a plurality of source macroblock information corresponding to the source video data at corresponding memory locations; and
an index table generator having an input to receive a size indicator of a destination image and an output to provide data representative of an index table identifying a first portion of the plurality of source macroblock information to be used to generate a first destination source vector, wherein the index table is based on the size indicator of the destination image.

42. (New) The system of claim 41, wherein the index table comprises a plurality of entries, each entry comprising an identifier associated with a corresponding memory location storing corresponding source macroblock information.

43. (New) The system of claim 42, further comprising:
a second memory controller to access source macroblock information based on a subset of the entries of the index table; and
an encoder coupled to the second memory controller to generate a destination motion vector based on the accessed source macroblock information.

44. (New) A system comprising:
means for accessing a first index table comprising a plurality of entries, each entry comprising an identifier associated with a corresponding memory location storing corresponding macroblock information;
means for accessing a first plurality of macroblock information in a first order based on identifiers accessed from a first subset of the plurality of entries of the first index table and wherein the first plurality of macroblock information is associated with a first source macroblock and includes motion vector and quantization information; and
means for generating a first estimated destination motion vector based on the first plurality of macroblock information.

PATENT

45. (New) The system of claim 44, further comprising:
means for generating a decoded image based on the first plurality of macroblock
information.

46. (New) The system of claim 44, wherein each entry of the plurality of entries is
arranged relative to the other entries of the plurality of entries to indicate the first order.

47. (New) The system of claim 44, further comprising:
means for accessing a second index table comprising a plurality of entries, each entry
comprising an identifier associated with a corresponding memory location storing
corresponding macroblock information;
means for accessing a second plurality of macroblock information in a second order
based on identifiers accessed from a second subset of the plurality of entries of the
second index table and wherein the second plurality of macroblock information is
associated with a second source macroblock and includes motion vector and
quantization information; and
means for generating a second estimated destination motion vector based on the second
plurality of macroblock information.

48. (New) The system of claim 47, further comprising:
means for generating a first macroblock based on the first estimated destination motion
vector;
means for generating a second macroblock based on the second estimated destination
motion vector; and
wherein the first and second macroblocks are to be displayed
simultaneously.

49. (New) A method comprising:
accessing a first index table;
accessing a first plurality of macroblock information in a first order at a
video decoder to generate a first decoded image, wherein the first

PATENT

order is based upon the first index table and the first plurality of macroblock information is associated with a source macroblock;
processing the first plurality of macroblock information to generate a first estimated destination motion vector;
accessing a second index table;
accessing a second plurality of macroblock information in a second order at the video decoder to generate a second decoded image, wherein the second order is based upon the second index table and the second plurality of macroblock information is associated with a source macroblock;
processing the second plurality of macroblock information to generate a second estimated destination macroblock information; and
generating a first macroblock based on the first estimated destination vector and a second macroblock based on the second estimated destination vector, wherein the first and second macroblocks are to be displayed simultaneously.